# ThinkServer TD350 Platform Specifications



| Components | Specification |
|---|---|
| Dimensions | Tower or 4U rack.<br>Tower: Height: 459 mm (18.1 in), width: 251 mm (9.9 in), depth: 686 mm (27 in)<br>Rack: height: 173 mm (6.8 in), width: 482 mm (19 in), depth: 686 mm (27 in) |
| Weight | Minimum configuration: 22 kg (48.5 lb), maximum: 41.4 kg (91.27 lb) |
| Processor | Up to two **135W Intel Xeon E5-2600 v4 or E5-2600 v3** family processors. |

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|---|---|
| E5-2698 v4 | 20C/2.2GHz/50MB/135W/DDR4-2400 |
| E5-2695 v4 | 18C/2.1GHz/45MB/120W/DDR-2400 |
| E5-2690 v4 | 14C/2.6GHz/35MB/135W/DDR4-2400 |
| E5-2683 v4 | 16C/2.1GHz/40MB/120W/DDR-2400 |
| E5-2680 v4 | 14C/2.4GHz/35MB/120W/DDR4-2400 |
| E5-2667 v4 | 8C/3.2GHz/25MB/135W/DDR4-2400 |
| E5-2660 v4 | 14C/2GHz/35MB/105W/DDR4-2400 |
| E5-2650L v4 | 14C/1.7GHz/35MB/65W/DDR4-2400 |
| E5-2650 v4 | 12C/2.2GHz/30MB/105W/DDR4-2400 |
| E5-2643 v4 | 6C/3.4GHz/20MB/135W/DDR4-2400 |
| E5-2640 v4 | 10C/2.4GHz/25MB/90W/DDR4-2133 |
| E5-2637 v4 | 4C/3.5GHz/15MB/135W/DDR4-2400 |
| E5-2630L v4 | 10C/1.8GHz/25MB/55W/DDR4-2133 |
| E5-2630 v4 | 10C/2.2GHz/20MB/85W/DDR4-2133 |
| E5-2623 v4 | 4C/2.6GHz/10MB/85W/DDR4-2133 |
| E5-2620 v4 | 8C/2.1GHz/20MB/85W/DDR4-2133 |
| E5-2609 v4 | 8C/1.7GHz/20MB/85W/DDR4-1866 |
| E5-2603 v4 | 6C/1.7GHz/15MB/85W/DDR4-1866 |
| E5-2698 v3 | 16C/2.3GHz/40MB/135W/DDR4-2133 |
| E5-2695 v3 | 14C/2.3GHz/35MB/120W/DDR4-2133 |
| E5-2690 v3 | 12C/2.6GHz/30MB/135W/DDR4-2133 |
| E5-2685 v3 | 12C/2.6GHz/30MB/120W/DDR4-2133 |
| E5-2683 v3 | 14C/2GHz/35MB/120W/DDR4-2133 |
| E5-2680 v3 | 12C/2.5GHz/30MB/120W/DDR4-2133 |
| E5-2670 v3 | 12C/2.3GHz/30MB/120W/DDR4-2133 |
| E5-2667 v3 | 8C/3.2GHz/20MB/135W/DDR4-2133 |
| E5-2660 v3 | 10C/2.6GHz/25MB/105W/DDR4-2133 |
| E5-2650L v3 | 12C/1.8GHz/30MB/65W/DDR4-2133 |
| E5-2650 v3 | 10C/2.3GHz/25MB/105W/DDR4-2133 |
| E5-2643 v3 | 6C/3.4GHz/20MB/135W/DDR4-2133 |
| E5-2640 v3 | 8C/2.6GHz/20MB/90W/DDR4-1866 |
| E5-2637 v3 | 4C/3.5GHz/15MB/135W/DDR4-2133 |
| E5-2630L v3 | 8C/1.8GHz/20MB/55W/DDR4-1866 |
| E5-2630 v3 | 8C/2.4GHz/20MB/85W/DDR4-1866 |
| E5-2623 v3 | 4C/3GHz/10MB/105W/DDR4-1866 |
| E5-2620 v3 | 6C/2.4GHz/15MB/85W/DDR4-1866 |
| E5-2609 v3 | 6C/1.9GHz/15MB/85W/DDR4-1600 |
| E5-2603 v3 | 6C/1.6GHz/15MB/85W/DDR4-1600 |

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|---|---|
| Chipset | Intel C610 Series Chipset |
| Memory DIMMs | 16 DIMM sockets (8 DIMMs per processor), 8-channel capable (4-channel per processor). RDIMM and LRDIMM (cannot be intermixed), DDR4, up to 2400MHz |
| Memory capacity | 512GB (RDIMM, 32GB x 16)/1024GB (LRDIMM, 64GB x 16), 2nd CPU is needed |
| Memory protection | ECC, memory mirroring, lockstep, and memory sparing |

RAID controller

| RAID controller | Drive type | RAID support | Compatible models |
|---|---|---|---|
| Onboard RAID110i | 6Gbs SATA | 0/1/10,5 with optional key | 5x3.5" HS/ES, 8x2.5" HS |
| RAID520i PCIe | 12Gbs SAS/SATA | 0/1/10,5/50 with optional key | 5x3.5" HS, 8x2.5" HS |
| RAID720i PCIe | 12Gbs SAS/SATA | 0/1/10/5/50,6/60 with optional cache | 5x3.5" HS, 8x2.5" HS |
| AnyRAID 510i | 6Gbs SAS/SATA | 0/1/10,5/50 with optional key | 5x3.5" HS, 8x2.5" HS |
| AnyRAID 720i | 12Gbs SAS/SATA | 0/1/10/5/50, 6/60 with optional cache | 5x3.5" HS, 8x2.5" HS |
| AnyRAID 720ix | 12Gbs SAS/SATA | 0/1/10/5/50/6/60 | 15x3.5" HS, 16/32x2.5" HS |

Optional cache for RAID 720/AnyRAID 720i and 720ix: 1GB read-only memory or 1GB/2GB/4GB flash with super capacitor. Flash options include CacheVault, CacheCade Pro, and FastPath. 720ix must have cache.

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| Disk drive bays | Up to 15 3.5" or 32 2.5" hot-swap bays, or up to 5 3.5" easy-swap bays, on front.<br>Up to 2 M.2 SSD drives via optional M.2 module. Up to one internal LTO-6 SAS tape drive on 720ix model, or external RDX tape drive via USB. |

| Components | Specification |
|---|---|
| Maximum internal storage | 3.5" model: up to 120TB with 7.2K SATA or SAS HDD, up to 27TB with 10K SAS HDD, up to 9TB with 15K SAS HDD, or up to 24TB with SATA or SAS SSD.<br>2.5" model: up to 64TB with 7.2K SATA HDD, up to 57.6TB with 10K SAS HDD, up to 19.2TB with 15K SAS HDD, or up to 51.2TB with SATA or SAS SSD |
| SD module | Up to 2 SDHC flash cards via optional SD module, 8GB or 32GB each |
| Optical drive | Two 5.25" bays for optical drive. DVD-ROM or DVD±RW. Half-height or 9.5mm |
| Network interfaces | One dedicate management port, two gigabit ethernet ports.<br>Supports optional discrete network adapters via PCIe slots |
| Security features | Power-on and administrator password. Optional TPM (TCG 1.2 or 2.0-compliant) |
| Systems management | Supports ThinkServer System Manager (TSM), optional TSM Premium for remote presence. UEFI. Onboard Aspeed AST2400 graphics/management processor,<br>IPMI 2.0-compliant baseboard management controller (BMC).<br>Control Panel LEDs shows the status of power, ID, network, system.<br>Supports ThinkServer Diagnostics, ThinkServer Deployment Manager, ThinkServer Energy Manager, ThinkServer System Manager CLI, Lenovo ThinkServer Partner Pack for VMware vCenter and Microsoft System Center Operations Manager, ThinkServer Power Planner. |
| Operating systems supported | Microsoft Windows Server 2016/2012 R2/2012/2008 R2. Windows Small Business Server 2011. Red Hat Enterprise Linux 6.5/6.6/7. SUSE Linux Enterprise Server 11. VMware vSphere (ESXi) 5.1 P5/5.5 U2/6.0 |
| Base warranty | 1 or 3-year limited onsite service with 9x5/NBD. |

Power supply

Up to two redundant hot-swap 450W/550W/750W/1100W power supplies.
450 W is 80 PLUS Gold qualified. 550W and 1100W are 80 PLUS Platinum qualified. 750W is 80 PLUS Platinum or Titanium qualified. 750W Titanium is 200V - 240V, others are 110V - 240V.

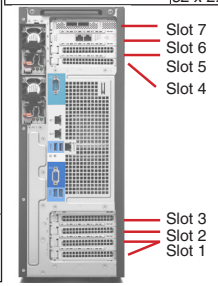
| Disk bay configuration | PSU requirements | | | |
|---|---|---|---|---|
| | 450W | 550W | 750W | 1100W |
| 5x3.5" ES | • (up to 1 CPU) | • | • | • |
| 5x3.5" HS | • (up to 1 CPU) | • | • | • |
| 15x3.5" HS | | | • | • |
| 8x2.5" HS | • (up to 1 CPU) | • | • | • |
| 16x2.5" HS | • (up to 1 CPU) | • | • | • |
| 32x2.5" HS | | | • | • |

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|---|---|
| Graphics | Onboard Aspeed AST2400 with 16MB memory, one VGA on rear |
| Front ports | Two USB 2.0 |
| Rear ports | One VGA, four USB 3.0, one RJ-45 (dedicate/share mgmt), two ethernet (RJ-45), one serial (9-pin) |
| Cooling | 4 (3+1), hot-swap |
| Noise emissions | Operating: < 6.5 Bels. Idle: < 6 Bels (Maximum configuration) |

Environmental specification

| ASHRAE Class | A4 | A3 | A2 |
|---|---|---|---|
| Temperature - operating | 41 °F to 113 °F (5 °C to 45 °C) | 41 °F to 104 °F (5 °C to 40 °C) | 50 °F to 95 °F (10 °C to 35 °C) |
| Temperature - storage (with package) | -40 °C to 60 °C | | |
| Altitude - operating | (Unpressurized): 0-10000ft (0-3048m) | | |
| Humidity - operating (non-condensing) | 8%~90% | 8%~85% | 20%~80% |
| Humidity - storage (with package) | 8%~90%, non-condensing | | |

*ASHRAE Class A4: ES or 8x2.5" HS bays/Lenovo-qualified CPU; maximum of 120W thermal design power; not low-power type (no L-suffix in the CPU name)/No internal tape/Two PSU installed for redundancy/ Lenovo-qualified PCIe card; power consumption of each PCIe card does not exceed 15W.*
*32 x 2.5" models support ASHRAE Class A2, the other models support ASHRAE Class A3.*




**Expansion slots**

| | |
|---|---|
| Slot 1 (CPU1) | PCIe 3.0 x16, full height, full length, double-wide |
| Slot 2 (CPU1) | PCIe 3.0 x16 (x8 elec), full height, full length |
| Slot 3 (CPU1) | PCIe 3.0 x16 (x8 elec), full height, full length |
| Slot 4 (CPU2) | PCIe 3.0 x16 (x8 elec), full height, full length |
| Slot 5 (CPU2) | PCIe 3.0 x16, full height, full length |
| Slot 6 (CPU2) | PCIe 3.0 x16 (x8 elec), full height, full length |
| Slot 7 (CPU2) | PCIe 3.0 x16 (x8 elec), full height, full length |

For a list of all supported options, please see *https://download.lenovo.com/pccbbs/options_iso/ocm_september_2016_thinkserver.xlsx sheet*

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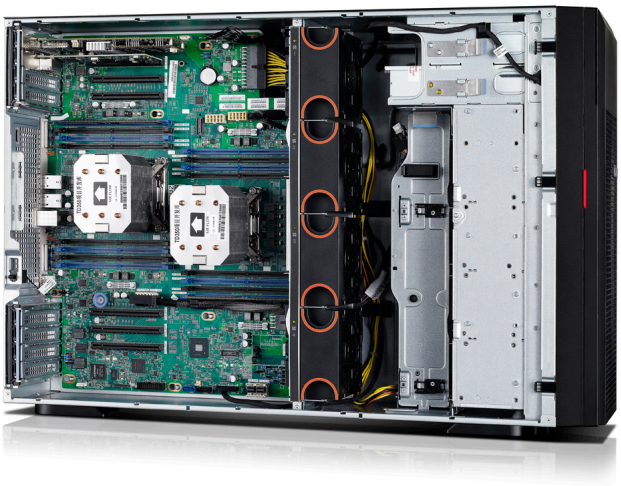
| Model | 70DG000M++ |
| --- | --- |
| Product | ThinkServer TD350 |
| Region | EMEA |
| Machine Type | 70DG |
| TopSeller | TopSeller |
| Processor | 1xE5-2603 v3 6C/1.6GHz/15MB/85W/DDR4-1600 |
| 2nd CPU | 4XG0F28787 |
| Memory | 1x8GB RDIMM DDR4-2133 ECC |
| RAID Controller | AnyRAID 110i+Key |
| Disk Bays | 5x3.5" HS |
| Storage | Open |
| Optical | HH DVD±RW |
| Add-on NIC | None |
| Add-on Ports | None |
| TPM | None |
| System Management | TSM |
| Operating System | None |
| Warranty | 3-year |
| Power Supply | 750Wx1 Platinum |
| Ann Date (mm/yy) | 09/14 |


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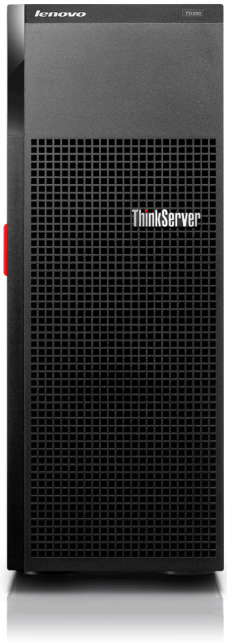

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